4.2.6.9 Public and Occupational Health and Safety

The assessments of potential radiological and chemical impacts associated with the storage alternatives at SRS are presented in this section. Summaries of the radiological impacts from normal operations are presented in Tables 4.2.6.9–1 and 4.2.6.9–2 for the public and workers, respectively. Impacts from hazardous chemicals are presented in Table 4.2.6.9–3. Summaries of impacts associated with postulated accidents are given in Tables 4.2.6.9–4 through 4.2.6.9–7. Detailed results are presented in Appendix M.

No Action Alternative

This section describes the radiological and hazardous chemical releases and their associated impacts resulting from normal operations involved with the SRS sitewide missions, including interim storage of Pu. The impacts to the public and to workers would be within applicable regulatory limits. For facility accidents, the risks and consequences are described in site safety documentation.

Normal Operation. The current mission at SRS, where Pu is in interim storage, is described in Section 3.7. The site has identified those facilities that will continue to operate under the No Action Alternative, including interim Pu storage facilities, the APSF, and others, if any, that will or may become operational by 2005. Based on that information, the radiological and chemical releases to the environment in 2005 and beyond (future operation) were developed and used in the impact assessments. The resulting doses and potential health effects to the public and workers at SRS are described below.

Radiological Impacts. The calculated annual dose to the average and maximally exposed members of the public from total site operation; the associated fatal cancer risks to these individuals from 50 years of operation; the dose to the population within 80 km (50 mi) from total site operation in the year 2030; and the projected number of fatal cancers in this population from 50 years of operation are presented in Table 4.2.6.9–1 under this alternative at SRS. The annual dose of 0.79 mrem to the MEI is within the radiological limits specified in NESHAPS (40 CFR 61, Subpart H) and DOE Order 5400.5. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be 2.0×10^{-5}. The annual dose to the population would be within the limit in proposed 10 CFR 834 and would be 44 person-rem. The corresponding number of fatal cancers in this population from 50 years of operation would be 1.1. To put operational doses into perspective, comparisons with doses from natural background radiation are included in the table.

Under the No Action Alternative shown in Table 4.2.6.9–2, the annual average dose from total site operations to a noninvolved (No Action) site worker and the annual dose from total site operations to the noninvolved (No Action) total site workforce would be 32 mrem and 226 person-rem, respectively, as shown in Table 4.2.6.9–2. The associated risk of fatal cancer to the average worker from 50 years of total site operations would be 6.5×10^{-4}, and the potential maximum number of fatal cancers among all workers from 50 years of total site operations would be 4.5. Doses to individual workers would be kept low by instituting badged monitoring and ALARA programs and worker rotations. As a result of the implementation of these mitigation measures, the estimated number of potential latent cancer fatalities for the operation of this facility would be reduced.

Hazardous Chemical Impacts. Hazardous chemical impacts to the public resulting from the normal operation under No Action at SRS are presented in Table 4.2.6.9–3. The hazardous chemical impacts from current site operations estimate the baseline site impacts for the various storage and disposition operation alternatives. The noncancer health effects expected and the risk of cancer due to the total chemical exposures were estimated for each site. Since the major releases due to normal operation at SRS would make up nearly all of the exposures to onsite workers and to the public in adjacent communities, contributions to the hazardous chemical concentrations from all other sources (for example, industrial operations), are considered negligible for purposes of risk calculations.

Table 4.2.6.9–2. Potential Radiological Impacts to Workers During Normal Operation at Savannah River Site—Storage Alternatives

Receptor	Upgrade[a,b]	Consolidation[a]	Collocation[a]
Involved Workforce[c]			
Average worker dose (mrem/yr)[d]	250	258	264
50-year risk of fatal cancer	5.0×10^{-3}	5.2×10^{-3}	5.3×10^{-3}
Total dose (person-rem/yr)	7.5	24	25
50-year fatal cancers	0.15	0.48	0.50
Noninvolved Workforce[e]			
Average worker dose (mrem/yr)[d]	36	36	36
50-year risk of fatal cancer	7.2×10^{-4}	7.2×10^{-4}	6.5×10^{-4}
Total dose (person-rem/yr)	259	259	259
50-year fatal cancers	5.2	5.2	5.2
Total Site Workforce[f]			
Dose (person-rem/yr)	266	283	284
50-year fatal cancers	5.3	5.7	5.7

[a] Under the Upgrade Alternative, an estimated additional 30 involved workers would be needed if Pu is transferred from RFETS and LANL. The impacts given in the Upgrade column include those associated with these additional workers. The number of involved badged workers for the Consolidation and Collocation Alternatives would be 92 and 95, respectively.

[b] The health impacts shown here assume that the upgraded storage facility at SRS would include all of the Pu materials from both RFETS and LANL. For the Preferred Alternative, the additional materials to be stored in the upgraded storage facility at SRS would only include the surplus non-pit Pu materials from RFETS. Therefore, the health impacts from the Preferred Alternative at SRS would be slightly less than the impacts presented in the Upgrade Alternative in this table. The difference would be below detection limits.

[c] The involved worker is associated with operations of the proposed action. The maximum dose to an involved worker would be kept below 500 mrem per year. Based on a review of worker doses associated with similar operations (Section M.2.3.2), an average worker dose of 250 mrem per year was conservatively assumed. However, an effective ALARA program will ensure that the exposure will be reduced to that level which is as low as reasonably achievable.

[d] The radiological limit for an individual worker is 5,000 mrem/year (10 CFR 835). However, DOE has also established an administrative control level of 2,000 mrem/yr (DOE 1992t); the site must make reasonable attempts to maintain worker doses below this level.

[e] The noninvolved worker is onsite but not associated with operations of the proposed action. The projected number of noninvolved badged workers in 2005 is 7,199. The noninvolved workforce is equivalent to the No Action workforce in addition to a proposed 130 workers associated with future operation of the APSF.

[f] The impact to the total site workforce is the summation of the involved worker impact and the noninvolved worker impact.

[Text deleted.]

Source: Section M.2.

Table 4.2.6.9–3. Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Savannah River Site—No Action and Storage Alternatives

	No Action	Upgrade With RFETS Non-Pit Material		Upgrade With RFETS and LANL Material		Consolidation		Collocation	
Receptor	Total Site[a]	Facility[b]	Total Site[a]	Facility[b]	Total Site[a]	Facility[b]	Total Site[a]	Facility[b]	Total Site[a]
Maximally Exposed Individual (Public)									
Hazard index[c]	5.2×10^{-3}	1.5×10^{-6}	5.2×10^{-3}	1.6×10^{-6}	5.2×10^{-3}	2.8×10^{-6}	5.2×10^{-3}	6.2×10^{-6}	5.2×10^{-3}
Cancer risk[d]	1.3×10^{-7}	0	1.3×10^{-7}	0	1.3×10^{-7}	7.5×10^{-9}	1.4×10^{-7}	7.5×10^{-9}	1.4×10^{-7}
Worker Onsite									
Hazard index[e]	1.2	2.1×10^{-4}	1.2	2.2×10^{-4}	1.2	6.0×10^{-4}	1.2	1.0×10^{-3}	1.2
Cancer risk[f]	1.9×10^{-4}	0	1.9×10^{-4}	0	1.9×10^{-4}	1.1×10^{-5}	2.1×10^{-4}	1.1×10^{-5}	2.0×10^{-4}

[a] Total=Sum of the No Action plus the contributions of the above activity.
[b] Contribution from above facilities operations only. These values bound the addition of RFETS and LANL.
[c] Hazard Index for MEI=Sum of individual Hazard Quotients (noncancer health effects) for MEI.
[d] Cancer risk for MEI= (Emissions for 8-hr) x (0.286 [converts concentrations to doses]) x (slope factor [SF]).
[e] Hazard Index for workers=Sum of individual Hazard Quotients (noncancer health effects) for workers.
[f] Cancer risk for workers=(emissions for 8-hr) x (0.286 [converts concentrations to doses]) x (0.237[fraction of year exposed]) x (0.571 [fraction of lifetime working]) x (SF).
Note: Where there are no known carcinogens among the hazardous chemicals emitted, there are no slope factors, therefore the calculated cancer risk value is 0.
Source: Section M.3; Tables M.3.4–22 through M.3.4–25.

The HI to the MEI of the public at SRS resulting from normal operation under the No Action Alternative is 5.2×10^{-3}, and the cancer risk is 1.3×10^{-7}. The HI to the onsite worker is 1.2, and the cancer risk is 1.9×10^{-4}. The HIs and cancer risks would remain constant over 50 years of operation because the exposures would be expected to remain the same.

Facility Accidents. Under the No Action Alternative, Pu would continue to be stored at the site in existing facilities. Estimates of facility accident impacts under No Action are described in the *Environmental Impact Statement, Interim Management of Nuclear Materials* for SRS (DOE/EIS-0220).[2]

[2] The EIS estimated the amount of radioactive material that could be released from the F-Canyon into the environment as a result of a severe earthquake. Using up-to-date seismic data, SRS completed a detailed evaluation of the likelihood of a severe earthquake and a structural analysis quantifying the likelihood of structural failure of F-Canyon for a range of ground motions in the *Supplemental Analysis of Seismic Activity on F-Canyon* (August 1996). Based on the evaluation, an earthquake that could occur about once every 8,000 years could cause a level of structural damage to F-Canyon similar to the level of damage attributed to the earthquake considered in the *Environmental Impact Statement, Interim Management of Nuclear Materials*. Additionally, the response spectrum associated with the 8,000-year earthquake was determined to encompass (be more severe than) the Blume response spectra. The earthquake used in the accident analysis was an event with a response spectrum (a profile of ground acceleration over a range of frequencies of motion) and peak ground acceleration as defined by J.A. Blume & Associates Engineers for SRS in the early 1980s. A frequency of occurrence (or return period) of once every 5,000 years was stated to correspond to the Blume earthquake. Thus, the capability of the F-Canyon to survive an earthquake more severe than that evaluated in the EIS, in combination with the fact that the likelihood of this level of damage was less than assumed in the EIS (1 per 8,000 years compared to 1 per 5,000 years), indicates that F-Canyon is seismically as safe, or safer, than indicated in the EIS. Two other analyses were also completed; they concluded that F-Canyon, as built, would withstand an earthquake of a magnitude of the Blume spectrum, with less damage than estimated for the EIS earthquake analysis, and that there would be no greater releases to the environment. Thus, estimates of the health effects (latent cancer fatalities) would not be greater than those described in the EIS and could be smaller than those previously analyzed in the EIS.

For the long-term storage alternatives at SRS in this PEIS, a severe earthquake was postulated with sufficient magnitude to cause major destruction of the facility. The probability of a severe earthquake and release of radioactive material was estimated at $1x10^{-7}$/yr. The *Environmental Impact Statement, Interim Management of Nuclear Materials* for SRS postulates a severe earthquake with a probability of occurrence of $2x10^{-4}$/yr. These two severe earthquake probabilities are not the same because of differences in the underlying assumptions and building characteristics. For example the storage facility in the Storage and Disposition PEIS would be new and designed with features to reduce the potential for earthquake damage and release of radioactive materials. The SRS facilities are not new and would react differently to an earthquake. These facilities would continue to operate in accordance with DOE Orders which ensure that the risk to the public of prompt fatalities due to accidents or cancer fatalities due to operations will be minimized. The safety to workers and the public from accidents at existing facilities is also controlled by Technical Safety Requirements specified in SARs or a Basis for Interim Operations document prepared and maintained specifically for a facility or process within a facility. Under these controls, any change in approved operations or to facilities would cause a halt in operations until it can be established that worker and public safety has not been compromised.

Upgrade Alternative

[Text deleted.]

Preferred Alternative: Upgrade With Rocky Flats Environmental Technology Site Non-Pit Plutonium Subalternative

Modify Actinide Packaging and Storage Facility for Continued Plutonium Storage

This section describes the radiological and hazardous chemical releases and their associated impacts resulting from either normal operation or accidents involved with storing SRS Pu and RFETS non-pit Pu in the upgraded APSF at SRS. The section describes the impacts of normal facility operations, then describes impacts of facility accidents.

During normal operation at SRS, the operation of the modified APSF would result in impacts that are within applicable regulatory limits, due in part to worker rotation.

Normal Operation. There would be no radiological releases during construction activities associated with the facility upgrade at SRS. Construction worker exposures to material potentially contaminated with radioactivity (for example, from construction activities involved with existing contaminated soil) would be limited to assure that doses are maintained ALARA. Toward this end, construction workers would be monitored, as appropriate. Limited hazardous chemical releases are anticipated as a result of the construction activities. However, concentrations would be within the regulated exposure limits.

Radiological Impacts. Doses to the public from storage under the Upgrade Alternative are included in Table 4.2.6.9–1. The dose to the MEI under the Preferred Alternative would be less. The dose to the MEI of the public due to annual operations under the Upgrade Alternative With RFETS Non-Pit Pu Material would be $6.8x10^{-6}$ mrem. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be $1.7x10^{-10}$. The impacts to the average individual would be less. As a result of operation under this alternative in the year 2030, the population dose would be $2.9x10^{-4}$ person-rem. The corresponding number of fatal cancers in this population due to 50 years of operation would be$7.2x10^{-6}$. The health impacts shown here assume that the upgraded storage facility at SRS would include the Pu materials from both RFETS and LANL. Therefore, the health impacts from the Preferred Alternative at SRS (only RFETS non-pit Pu) would be slightly less than the impacts presented in the Upgrade With All or Some RFETS Pu and LANL Pu Subalternative as shown in Table 4.2.6.9–1. The difference would be below detection limits.

The dose to the MEI from annual total site operations is within the radiological limits specified in NESHAPS (40 CFR 61, Subpart H) and DOE Order 5400.5, and would be 0.79 mrem. From 50 years of total site operations, the corresponding risk of fatal cancer to this individual would be 2.0×10^{-5}. These values are presented in Table 4.2.6.9–1. The impacts on the average individual would be less. This activity would be included in a program to ensure that doses to the public are ALARA. As a result of total site operations in the year 2030, the population dose would be within the limit in proposed 10 CFR 834 and would be 44 person-rem. The corresponding number of fatal cancers in this population from 50 years of total site operations would be 1.1. The health impacts shown here assume that the upgraded storage facility at SRS would include the Pu materials from both RFETS and LANL. Therefore, the health impacts from the Preferred Alternative at SRS (only RFETS non-pit Pu) would be slightly less than the impacts presented in the Upgrade With All or Some RFETS Pu and LANL Pu Subalternative as shown in Table 4.2.6.9–1. The difference would be below detection limits.

Doses to onsite workers from normal operations are given in Table 4.2.6.9–2. Included are involved workers directly associated with the new storage facility, workers who are not involved with this facility, and the entire workforce at SRS. All doses fall within regulatory limits and administrative control levels. The associated risks and numbers of fatal cancers among the different workers from 50 years of operations are included in the table. Dose to individual workers would be kept low by instituting badged monitoring and ALARA programs and also workers rotations. As a result of the implementation of these mitigation measures, the actual number of fatal cancers calculated would be lower for the operation of this facility. The health impacts shown here assume that the upgraded storage facility at SRS would include the non-pit Pu materials from both RFETS and LANL. Therefore, the health impacts from the Preferred Alternative at SRS (only RFETS non-pit Pu) would be slightly less than the impacts presented in the Upgrade With All or Some RFETS Pu and LANL Pu Subalternative as shown in Table 4.2.6.9–2. The difference would be below detection limits.

Hazardous Chemical Impacts. Hazardous chemical impacts to the public and to the onsite worker resulting from the normal operations of the upgraded storage facilities at SRS are presented in Table 4.2.6.9–3. The impacts from all site operations, including the upgraded storage facilities are also included in this table. Total site impacts which include the No Action impact plus the upgrade facility impacts, are provided. All analyses to support the values presented in this table are provided in Section M.3.

The HI to the MEI of the public is 1.5×10^{-6}, and the cancer risk is zero (because no carcinogens are released from the hazardous chemicals used) as a result of operation of the upgraded storage facilities in the year 2030. The HI and cancer risk would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the upgrade facility, would result in an HI of 5.2×10^{-3} and a cancer risk of 1.3×10^{-7} for the MEI in the year 2030. This would be expected to remain constant as a result of 50 years of operation.

The HI to the onsite worker would be 2.1×10^{-4} and the cancer risk is zero (because no carcinogens are released from the hazardous chemicals used) as a result of operation of the upgraded storage facilities in the year 2030. The HI and cancer risk from hazardous chemicals would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the upgrade facility, would result in a HI of 1.2 and a cancer risk of 1.9×10^{-4} for the onsite worker in the year 2030 and would be expected to remain constant as a result of 50 years of operation. The HI to the worker resulting from operation of the upgraded storage facilities at SRS may exceed the acceptable health regulatory level. The total site HI of 1.2 is a screening level value which does not necessarily mean that workers will incur hazardous health effects. Moreover, since one of the assumptions used in the ISCST2 model to calculate HI is that the entire emissions inventory is from a single stack and all emissions impact the onsite worker, it may overstate the actual conditions being analyzed. This would be true at a large site, like SRS, where emission sources and receptors are widely dispersed, over 830 km^2 (320 mi^2), and the primary contributor to the HI is CO which is not concentrated in any single emissions stack.

Facility Accidents. Under this upgrade subalternative, non-pit Pu from RFETS would be stored at SRS in a modified APSF. The modified APSF facility is expected to result in a reduced risk of accidents to workers and the public. Design modifications to the storage facility will ensure that the continued storage of Pu will be in accordance with contemporary DOE Orders, and that the risks to the public of prompt fatalities due to accidents and of latent cancer fatalities due to operations would be minimized as shown in Table 4.2.6.9–4. The safety of workers and the public during operations is routinely controlled and monitored through Technical Safety Requirements that are specified in approved safety analyses that would be prepared and implemented for the upgraded facilities.

A set of potential accidents have been postulated for upgraded Pu storage with RFETS non-pit Pu at SRS for which there may be releases of Pu that may impact onsite workers and the offsite population. The accident consequences and risks to a worker located 1,000 m (3,280 ft) from the accident release point, the maximum offsite individual located at the site boundary, and the population located within 80 km (50 mi) of the accident release point are summarized in Table 4.2.6.9–4. For the set of accidents analyzed, the maximum number of cancer fatalities in the population with 80 km (50 mi) would be 0.098 at SRS for the beyond design basis earthquake accident with an estimated probability of 1.0×10^{-7} per year (that is, possibility of severe earthquake occurring is estimated to be about 1.0×10^{-5}, once in 100,000 years, multiplied by a damage and release probability of 0.01). The corresponding 50-year facility lifetime risk from the same accident scenario for the population, maximum offsite individual, and worker at 1,000 m (3,280 ft), would be 4.9×10^{-7}, 9.8×10^{-11}, and 5.0×10^{-9}, respectively. The maximum population 50-year facility lifetime risk would be 4.6×10^{-4} (that is, one fatality in about 100,000) at SRS for the PCV penetration by corrosion accident scenario with a probability of 4.8×10^{-3} per year. The corresponding maximum offsite individual and worker 50-year facility lifetime risks would be 7.0×10^{-8} and 2.9×10^{-6}, respectively. Section M.5 presents additional facility accident data and summary descriptions of the accident scenarios identified in Table 4.2.6.9–4.

Involved workers, those that would work in the facilities associated with the proposed action, may be subject to injury and, in some cases, fatality as a result of potential accidents. The locations of workstations, number of workers, personnel protective features, engineered safety features, and other design details affect the extent of worker exposures to accidents. Certain accidents such as fires, explosions and criticality could cause fatalities to workers close to the accident. Prior to construction of a new or modification of an existing facility, DOE Orders require detailed safety analyses to assure that facility designs and operating procedures limit the number of workers in hazardous areas and minimize risk of injury or fatality in the event of an accident.

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Upgrade With All or Some Rocky Flats Environmental Technology Site Plutonium and Los Alamos National Laboratory Plutonium Subalternative

Modify Actinide Packaging and Storage Facility for Continued Plutonium Storage

Normal Operation. The impacts from radiological and hazardous chemical emissions would be slightly greater than the impacts for the Upgrade With RFETS Non-Pit Pu Subalternative. The difference would be below detection limits. The radiological dose to the public and workers are shown in Tables 4.2.6.9–1 and 4.2.6.9–2, respectively. Impacts from hazardous chemicals are given in Table 4.2.6.9–3.

Facility Accidents. Under the Upgrade Alternative, Pu from RFETS and LANL would be stored at SRS. The upgraded facility is expected to result in a reduced risk of accidents to workers and the public. Design modifications to the storage facility will ensure that the storage of Pu will be in accordance with contemporary DOE Orders, and that the risks to the public of prompt fatalities due to accidents and of latent cancer fatalities due to operations would be minimized as shown in Table 4.2.6.9–5. The safety of workers and the public during operations is routinely controlled and monitored through Technical Safety Requirements that are specified in approved safety analyses that would be prepared and implemented for the upgraded facilities.

Table 4.2.6.9–4. Upgrade With Rocky Flats Environmental Technology Site Non-Pit Plutonium Subalternative—Accident Impacts at Savannah River Site

	Worker at 1,000 m		Maximum Offsite Individual		Population to 80 km		
Accident Description	Risk of Cancer Fatality (per 50 yr)[a]	Probability of Cancer Fatality[b]	Risk of Cancer Fatality (per 50 yr)[a]	Probability of Cancer Fatality[b]	Risk of Cancer Fatality (per 50 yr)[a]	Number of Cancer Fatalities[c]	Accident Frequency (per yr)
PCV puncture by forklift	8.6×10^{-8}	2.9×10^{-6}	2.1×10^{-9}	7.1×10^{-8}	1.0×10^{-5}	3.4×10^{-4}	6.0×10^{-4}
PCV breach by firearms discharge	5.0×10^{-9}	2.9×10^{-7}	1.2×10^{-10}	7.1×10^{-9}	6.0×10^{-7}	3.4×10^{-5}	3.5×10^{-4}
PCV penetration by corrosion	2.9×10^{-6}	1.2×10^{-5}	7.0×10^{-8}	2.9×10^{-7}	3.4×10^{-4}	1.4×10^{-3}	4.8×10^{-3}
Vault fire	2.6×10^{-9}	5.2×10^{-4}	5.6×10^{-11}	1.1×10^{-5}	2.7×10^{-7}	0.054	1.0×10^{-7}
Truck bay fire	2.0×10^{-9}	4.0×10^{-4}	4.9×10^{-11}	9.9×10^{-5}	2.4×10^{-7}	0.048	1.0×10^{-7}
Spontaneous combustion	2.0×10^{-11}	5.8×10^{-7}	5.0×10^{-13}	1.4×10^{-8}	2.4×10^{-9}	6.9×10^{-5}	7.0×10^{-7}
Explosion in the vault	3.5×10^{-10}	7.1×10^{-5}	9.0×10^{-12}	1.7×10^{-6}	4.2×10^{-8}	8.3×10^{-3}	1.0×10^{-7}
Explosion outside of vault	2.2×10^{-11}	4.3×10^{-6}	5.3×10^{-13}	1.5×10^{-7}	2.6×10^{-9}	5.1×10^{-4}	1.0×10^{-7}
Nuclear criticality	1.4×10^{-11}	2.8×10^{-6}	2.8×10^{-13}	5.7×10^{-8}	2.3×10^{-10}	4.7×10^{-5}	1.0×10^{-7}
Beyond evaluation basis earthquake	5.0×10^{-9}	9.8×10^{-4}	9.8×10^{-11}	2.0×10^{-5}	4.9×10^{-7}	0.098	1.0×10^{-7}
Expected risk[d]	3.0×10^{-6}	–	7.2×10^{-8}	–	3.5×10^{-4}	–	–

[a] The risk values are calculated by multiplying the probability of cancer fatality (for the worker at 1,000 m or the maximum offsite individual) or the number of cancer fatalities (for the population to 80 km) by the accident frequency and the number of years of operation.

[b] Increased likelihood (or probability) of cancer fatality to a hypothetical individual (a single worker at a distance of 1,000 m or the site boundary, whichever is smaller, or to a hypothetical individual in the offsite population located at the site boundary) if exposed to the indicated dose. The value assumes the accident has occurred.

[c] Estimated number of cancer fatalities in the entire offsite population out to a distance of 80 km if exposed to the indicated dose. The value assumes the accident has occurred.

[d] Expected risk is the sum of the risks over the 50-year lifetime of the facility.

Note: All values are mean values.

Source: Calculated using the source terms in Tables M.5.2.1.1–4 and M.5.2.1.1–5 and the MACCS computer code.

Involved workers, those that would work in the facilities associated with the proposed action, may be subject to injury and, in some cases, fatality as a result of potential accidents. The locations of workstations, number of workers, personnel protective features, engineered safety features, and other design details affect the extent of worker exposures to accidents. Certain accidents such as fires, explosions and criticality could cause fatalities to workers close to the accident. Prior to construction of a new or modification of an existing facility, DOE Orders require detailed safety analyses to assure that facility designs and operating procedures limit the number of workers in hazardous areas and minimize risk of injury or fatality in the event of an accident.

Consolidation Alternative

Construct New Plutonium Storage Facility

This section includes a description of radiological and hazardous chemical releases and their associated impacts resulting from either normal operation or accidents involved with the construction and operation of the new consolidated Pu storage facility at SRS.

Table 4.2.6.9–4. Upgrade With All or Some Rocky Flats Environmental Technology Site Plutonium and Los Alamos National Laboratory Plutonium Subalternative—Accident Impacts at Savannah River Site

	Worker at 1,000 m		Maximum Offsite Individual		Population to 80 km		
Accident Description	Risk of Cancer Fatality (per 50 yr)[a]	Probability of Cancer Fatality[b]	Risk of Cancer Fatality (per 50 yr)[a]	Probability of Cancer Fatality[a]	Risk of Cancer Fatality (per 50 yr)[a]	Number of Cancer Fatalities[c]	Accident Frequency (per year)
PCV puncture by forklift	8.6×10^{-8}	2.9×10^{-6}	2.1×10^{-9}	7.1×10^{-8}	1.0×10^{-5}	3.4×10^{-4}	6.0×10^{-4}
PCV breach by firearms discharge	5.0×10^{-9}	2.9×10^{-7}	1.2×10^{-10}	7.1×10^{-9}	6.0×10^{-7}	3.4×10^{-5}	3.5×10^{-4}
PCV penetration by corrosion	3.9×10^{-6}	1.2×10^{-5}	9.5×10^{-8}	2.9×10^{-7}	4.6×10^{-4}	1.4×10^{-3}	6.6×10^{-3}
Vault fire	3.5×10^{-9}	7.1×10^{-4}	7.6×10^{-11}	1.5×10^{-5}	3.7×10^{-7}	0.072	1.0×10^{-7}
Truck bay fire	2.0×10^{-9}	4.0×10^{-4}	4.9×10^{-11}	9.9×10^{-6}	2.4×10^{-7}	0.048	1.0×10^{-7}
Spontaneous combustion	2.0×10^{-11}	5.8×10^{-7}	5.0×10^{-13}	1.4×10^{-8}	2.4×10^{-9}	6.9×10^{-5}	7.0×10^{-7}
Explosion in the vault	4.8×10^{-10}	9.6×10^{-5}	1.2×10^{-11}	2.4×10^{-6}	5.7×10^{-8}	0.011	1.0×10^{-7}
Explosion outside of vault	2.2×10^{-11}	4.3×10^{-6}	5.3×10^{-13}	1.5×10^{-7}	2.6×10^{-9}	5.1×10^{-4}	1.0×10^{-7}
Nuclear criticality	1.4×10^{-11}	2.8×10^{-6}	2.8×10^{-13}	5.7×10^{-8}	2.3×10^{-10}	4.7×10^{-5}	1.0×10^{-7}
Beyond evaluation basis earthquake	6.9×10^{-9}	1.3×10^{-3}	1.3×10^{-10}	2.8×10^{-5}	6.7×10^{-7}	0.13	1.0×10^{-7}
Expected risk[d]	3.9×10^{-6}	–	9.7×10^{-8}	–	4.7×10^{-4}	–	–

[a] The risk values are calculated by multiplying the probability of cancer fatality (for the worker at 1,000 m or the maximum offsite individual) or the number of cancer fatalities (for the population to 80 km) by the accident frequency and the number of years of operation. Impacts not dependent on the quantity of Pu would be the same as those for the Upgrade With RFETS Non-Pit Pu Subalternative.

[b] Increased likelihood (or probability) of cancer fatality to a hypothetical individual (a single worker at a distance of 1,000 m or the site boundary, whichever is smaller, or to a hypothetical individual in the offsite population located at the site boundary) if exposed to the indicated dose. The value assumes the accident has occurred.

[c] Estimated number of cancer fatalities in the entire offsite population out to a distance of 80 km if exposed to the indicated dose. The value assumes the accident has occurred.

[d] Expected risk is the sum of the risks over the 50-year lifetime of the facility.

Note: All values are mean values.

Source: Calculated using the source terms in Tables M.5.2.1.1–4 and M.5.2.1.1–5 and the MACCS computer code.

[Text deleted.]

Normal Operation. There would be no radiological releases during the construction of a new consolidated Pu storage facility at SRS. Construction worker exposures to material potentially contaminated with radioactivity (for example, from construction activities involved with existing contaminated soil) would be limited to assure that doses are maintained ALARA. Toward this end, construction workers would be monitored as appropriate. Limited hazardous chemical releases are anticipated as a result of construction activities. However, concentrations would be within the regulated exposure limits and would not result in any health effects. During normal operation, there would be both radiological and hazardous chemical releases to the environment and also direct in-plant exposures. The resulting doses and potential health effects to the public and workers at SRS are described below.

Radiological Impacts. Radiological impacts to the public resulting from the normal operation of the new consolidated Pu storage facility are presented in Table 4.2.6.9–1. The impact from all site operations, including the new consolidated storage facility, are also given in the table. To put operational doses into perspective, comparisons with doses from natural background radiation are included in the table.

The dose to the MEI from annual storage facility operation would be $1.4x10^{-5}$ mrem. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be $3.5x10^{-10}$. The impacts to the average member of the public would be less. As a result of storage facility operation in the year 2030, the population dose would be $9.2x10^{-4}$ person-rem. The corresponding number of fatal cancers in this population from 50 years of operation would be $2.3x10^{-5}$.

The dose to the MEI from annual total site operations is within the radiological limits specified in NESHAPS (40 CFR 61, Subpart H) and DOE Order 5400.5, and would be 0.79 mrem. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be $2.0x10^{-5}$. The impacts to the average member of the public would be less This activity would be included in a program to ensure that doses to the public are ALARA. As a result of total site operations in the year 2030, the population dose would be within the limit in proposed 10 CFR 834 and would be 44 person-rem. The corresponding number of fatal cancers in this population from 50 years of operation would be 1.1.

Doses to onsite workers from normal operations are given in Table 4.2.6.9–2. Included are involved workers directly associated with the new consolidated Pu storage facility, workers who are not involved with the storage facility, and the entire workforce at SRS. All doses fall within regulatory limits and administrative control levels. The associated risks and number of fatal cancers among the different workers from 50 years of operation are included in the table. Dose to individual workers would be kept low by instituting badged monitoring and ALARA programs and also workers rotations. As a result of the implementation of these mitigation measures, the actual number of fatal cancers calculated would be lower for the operation of this facility.

Hazardous Chemical Impacts. Hazardous chemical impacts to the public and to the onsite worker resulting from the normal operations of the new consolidated Pu storage facility at SRS are presented in Table 4.2.6.9–3. The impacts from all site operations, including the consolidated storage facility, are also included in this table. Total site impacts, which include the No Action impact plus the facility impacts, are provided. All analyses to support the values presented in this table are provided in Section M.3.

The HI to the MEI of the public is $2.8x10^{-6}$, and the cancer risk is $7.5x10^{-9}$ as a result of operation of the new consolidated Pu storage facility in the year 2030. The HI and cancer risk from hazardous chemicals would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the upgrade facility, would result in an HI of $5.2x10^{-3}$ and a cancer risk of $1.4x10^{-7}$ for the MEI in the year 2030. This would be expected to remain constant over the 50 years of operation.

The HI to the onsite worker would be $6.0x10^{-4}$ and the cancer risk is $1.1x10^{-5}$ as a result of operation of the new consolidated Pu storage facility in the year 2030. The HI and cancer risk from hazardous chemicals would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the facility, would result in a HI of 1.2 and a cancer risk of $2.1x10^{-4}$ for the onsite worker in the year 2030 and would be expected to remain constant over the 50 years of operation.

Facility Accidents. A set of potential accidents have been postulated for consolidation of Pu at SRS for which there may be releases of Pu that may impact onsite workers and the offsite population. The accident consequences and risks to a worker located 1,000 m (3,280 ft) from the accident release point, the maximum offsite individual located at the site boundary, and the general population located within 80 km (50 mi) of the accident release point are summarized in Table 4.2.6.9–6. For the set of accidents analyzed, the maximum number of cancer fatalities in the population within 80 km (50 mi) would be 1.3 at SRS for the beyond design basis earthquake accident with an estimated probability of $1.0x10^{-7}$ per year (that is, probability of severe earthquake occurring is estimated to be about $1.0x10^{-5}$, once in 100,000 years, multiplied by a damage and release probability of 0.01). The corresponding 50-year facility lifetime risk from the same accident scenario

Table 4.2.6.9–6. Consolidation Alternative Accident Impacts at Savannah River Site

	Worker at 1,000 m		Maximum Offsite Individual		Population to 80 km		
Accident Description	**Risk of Cancer Fatality (per 50 yr)[a]**	**Probability of Cancer Fatality[b]**	**Risk of Cancer Fatality (per 50 yr)[a]**	**Probability of Cancer Fatality[b]**	**Risk of Cancer Fatalities (per 50 yr)[a]**	**Number of Cancer Fatalities[c]**	**Accident Frequency (per yr)**
PCV puncture by forklift	8.6×10^{-8}	2.9×10^{-6}	2.1×10^{-9}	7.1×10^{-8}	1.0×10^{-5}	3.4×10^{-4}	6.0×10^{-4}
PCV breach by firearms discharge	5.0×10^{-9}	2.9×10^{-7}	1.2×10^{-10}	7.1×10^{-9}	6.0×10^{-7}	3.4×10^{-5}	3.5×10^{-4}
PCV penetration by corrosion	3.8×10^{-5}	1.2×10^{-5}	9.3×10^{-7}	2.9×10^{-7}	4.5×10^{-3}	1.4×10^{-3}	0.064
Vault fire	3.4×10^{-8}	6.9×10^{-3}	7.4×10^{-10}	1.5×10^{-4}	3.6×10^{-6}	0.72	1.0×10^{-7}
Truck bay fire	2.0×10^{-9}	4.0×10^{-4}	4.9×10^{-11}	9.9×10^{-6}	2.4×10^{-7}	0.048	1.0×10^{-7}
Spontaneous combustion	2.0×10^{-11}	5.8×10^{-7}	5.0×10^{-13}	1.4×10^{-8}	2.4×10^{-9}	6.9×10^{-5}	7.0×10^{-7}
Explosion in the vault	4.7×10^{-9}	9.4×10^{-4}	1.2×10^{-10}	2.3×10^{-5}	5.6×10^{-7}	0.11	1.0×10^{-7}
Explosion outside of vault	2.2×10^{-11}	4.3×10^{-6}	5.3×10^{-13}	1.1×10^{-7}	2.6×10^{-9}	5.1×10^{-4}	1.0×10^{-7}
Nuclear criticality	1.4×10^{-11}	2.8×10^{-6}	2.8×10^{-13}	5.7×10^{-8}	2.3×10^{-10}	4.7×10^{-5}	1.0×10^{-7}
Beyond evaluation basis earthquake	6.7×10^{-8}	0.013	1.3×10^{-9}	2.7×10^{-4}	6.5×10^{-6}	1.3	1.0×10^{-7}
Expected risk[d]	3.8×10^{-5}	–	9.3×10^{-7}	–	4.5×10^{-3}	–	–

[a] The risk values are calculated by multiplying the probability of cancer fatality (for the worker at 1,000 m or the maximum offsite individual) or the number of cancer fatalities (for the population to 80 km) by the accident frequency and the number of years of operation.

[b] Increased likelihood (or probability) of cancer fatality to a hypothetical individual (a single onsite worker at a distance of 1,000 m or the site boundary, whichever is smaller or to a hypothetical individual in the offsite population located at the site boundary) if exposed to the indicated dose. The value assumes the accident has occurred.

[c] Estimated number of cancer fatalities in the entire offsite population out to a distance of 80 km if exposed to the indicated dose. The value assumes the accident has occurred.

[d] Expected risk is the sum of the risks over the 50-year lifetime of the facility.

Note: All values are mean values.

Source: Calculated using the source terms in Tables M.5.2.1.1–4 and M.5.2.1.1–5 and the MACCS computer code.

for the population, maximum offsite individual, and worker at 1,000 m (3,280 ft), would be 6.5×10^{-6}, 1.3×10^{-9}, and 6.7×10^{-8}, respectively. The maximum population 50-year facility lifetime risk would be 4.5×10^{-3} (that is, one fatality in about 10,000 years) at SRS for the PCV penetration by corrosion accident scenario with a probability of 0.064 per year. The corresponding maximum offsite individual and worker 50-year facility lifetime risks would be 9.3×10^{-7} and 3.8×10^{-5}, respectively. Section M.5 presents additional facility accident data and summary descriptions of the accident scenarios identified in Table 4.2.6.9–6.

Involved workers, those that would work in the facilities associated with the proposed action, may be subject to injury and, in some cases, fatality as a result of potential accidents. The locations of workstations, number of workers, personnel protective features, engineered safety features, and other design details affect the extent of worker exposures to accidents. Certain accidents such as fires, explosions and criticality could cause fatalities to workers close to the accident. Prior to construction of a new facility, DOE Orders require detailed safety analyses to assure that facility designs and operating procedures limit the number of workers in hazardous areas and minimize risk of injury or fatality in the event of an accident.

Collocation Alternative

Construct New Plutonium and Highly Enriched Uranium Storage Facilities

This section includes a description of radiological and hazardous chemical releases and their associated impacts resulting from either normal operation or accidents involved with the consolidation of Pu storage and collocation with HEU storage facilities at SRS. This storage would take place in a new Pu and HEU storage facility.

[Text deleted.]

Normal Operation. There would be no radiological releases during the construction of a new collocated storage facility at SRS. Construction worker exposures to material potentially contaminated with radioactivity (for example, from construction activities involved with existing contaminated soil) would be limited to assure that doses are maintained ALARA. Toward this end, construction workers would be monitored, as appropriate. Limited hazardous chemical releases are anticipated as a result of construction activities. However, concentrations would be within the regulated exposure limits. During normal operation, there would be both radiological and hazardous chemical releases to the environment and also direct in-plant exposures. The resulting doses and potential health effects to the public and workers are described below.

Radiological Impacts. Radiological impacts to the public resulting from the normal operation of the new collocated storage facility at SRS are presented in Table 4.2.6.9–1. The impacts from all site operations, including the new storage facility, are also given in the table. To put operational doses into perspective, comparisons with doses from natural background radiation are included in the table.

The dose to the MEI from annual storage facility operation is 1.4×10^{-5} mrem. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be 3.5×10^{-10}. The impacts to the average member of the public would be less. As a result of storage facility operation in the year 2030, the population dose would be 8.8×10^{-4} person-rem. The corresponding number of fatal cancers in this population from 50 years of operation would be 2.2×10^{-5}.

The dose to the MEI from annual total site operations is within the radiological limits specified in NESHAPS (40 CFR 61, Subpart H) and DOE Order 5400.5, and would be 0.79 mrem. From 50 years of operation, the corresponding risk of fatal cancer to this individual would be 2.0×10^{-5}. The impacts to the average member of the public would be less. This activity would be included in a program to ensure that doses to the public are ALARA. As a result of total site operation in the year 2030, the population dose would be within the limit in proposed 10 CFR 834 and would be 44 person-rem. The corresponding number of fatal cancers in this population from 50 years of operation would be 1.1.

Doses to onsite workers from normal operations are given in Table 4.2.6.9–2. Included are involved workers directly associated with the new storage facility, workers who are not involved with the storage facility, and the entire workforce at SRS. All doses fall within regulatory limits and administrative control levels. The associated risks and numbers of fatal cancers among the different workers from 50 years of operations are included in the table. Dose to individual workers would be kept low by instituting badged monitoring and ALARA programs and also workers rotations. As a result of the implementation of these mitigation measures, the actual number of fatal cancers calculated would be lower for the operation of the facility.

Hazardous Chemical Impacts. Hazardous chemical impacts to the public and to the onsite worker resulting from the normal operations of the new consolidation of Pu and collocation with HEU storage facilities at SRS are presented in Table 4.2.6.9–3. The impacts from all site operations, including the consolidation of Pu and collocation with HEU storage facilities are also included in this table. Total site impacts, which include the No

Action impact plus the facility impacts, are provided. All analyses to support the values presented in this table are provided in Section M.3.

The HI to the MEI of the public is $6.2x10^{-6}$, and the cancer risk is $7.5x10^{-9}$ as a result of operation of the new consolidation of Pu and collocation with HEU storage facilities in the year 2030. The HI and cancer risk from hazardous chemicals would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the new facility, would result in an HI of $5.2x10^{-3}$and a cancer risk of $1.4x10^{-7}$ for the onsite worker in the year 2030. This would be expected to remain constant as a result of 50 years of operation.

The HI to the onsite worker would be $1.0x10^{-3}$, and the cancer risk is $1.1x10^{-5}$ as a result of operation of the new consolidation of Pu and collocation with HEU storage facilities in the year 2030. The HI and cancer risk from hazardous chemicals would remain constant over 50 years of operation, because exposures would be expected to remain the same. The total site operation, including the new facility, would result in an HI of 1.2 and a cancer risk of $2.0x10^{-4}$ for the onsite worker in the year 2030 and would be expected to remain constant as a result of 50 years of operation.

Facility Accidents. A set of potential accidents have been postulated for which there may be releases of Pu or uranium that may impact onsite workers and the offsite population. Impacts of accidents that release both Pu and HEU are bounded by exposures to Pu. The accident consequences and risks to a worker located 1,000 m (3,280 ft) from the accident release point, the maximum offsite individual located at the site boundary, and the general population located within 80 km (50 mi) of the accident release point are summarized in Table 4.2.6.9–7. For the set of accidents analyzed, the maximum number of cancer fatalities in the population within 80 km (50 mi) would be 1.3 at SRS for the beyond design basis earthquake accident scenario with an estimated probability of $1.0x10^{-7}$ per year (that is, probability of severe earthquake occurring is estimated to be about $1.0x10^{-5}$, once in 100,000 years, multiplied by a damage and release probability of 0.01). The corresponding 50-year facility lifetime risk from the same accident scenario for the population, maximum offsite individual, and worker at 1,000 m (3,280 ft), would be $6.6x10^{-6}$, $9.2x10^{-10}$, and $6.7x10^{-8}$, respectively. The maximum population 50-year facility lifetime risk would be $4.6x10^{-3}$ (that is, one fatality in about 11,000 years) at SRS for the PCV penetration by corrosion accident scenario with a probability of 0.064 per year. The corresponding maximum offsite individual and worker 50-year facility lifetime risks would be $6.3x10^{-7}$ and $3.8x10^{-5}$, respectively. Section M.5 presents additional facility accident data and summary descriptions of the accident scenarios identified in Table 4.2.6.9–7.

Involved workers, those that would work in the facilities associated with the proposed action, may be subject to injury and, in some cases, fatality as a result of potential accidents. [Text deleted.] The locations of workstations, number of workers, personnel protective features, engineered safety features, and other design details affect the extent of worker exposures to accidents. Certain accidents such as fires, explosions, and criticality could cause fatalities to workers close to the accident. Prior to construction and operation of the facility, DOE Orders require detailed safety analyses to assure that facility designs and operating procedures limit the number of workers in hazardous areas and minimize risk of injury or fatality in the event of an accident.

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

If the strategic reserve and weapons R&D materials are not included, the impacts to the public and to workers from the accident-free storage activities would be reduced approximately in proportion to the decrease in the amount of material stored. The impacts from total site operations would decrease slightly. This subalternative applies to the No Action Alternative, the Upgrade Alternative, the Consolidation Alternative, and the Collocation Alternative. The risks due to accidents would also tend to be lower.

Table 4.2.6.9–7. Collocation Alternative Accident Impacts at Savannah River Site

	Worker at 1,000 m		Maximum Offsite Individual		Population to 80 km		
Accident Description	**Risk of Cancer Fatality (per 50 yr)[a]**	**Probability of Cancer Fatality[b]**	**Risk of Cancer Fatality (per 50 yr)[a]**	**Probability of Cancer Fatality[b]**	**Risk of Cancer Fatalities (per 50 yr)[a]**	**Number of Cancer Fatalities[c]**	**Accident Frequency (per yr)**
PCV puncture by forklift	$8.6x10^{-8}$	$2.9x10^{-6}$	$1.4x10^{-9}$	$4.8x10^{-8}$	$1.0x10^{-5}$	$3.5x10^{-4}$	$6.0x10^{-4}$
PCV breach by firearms discharge	$5.0x10^{-9}$	$2.9x10^{-7}$	$1.5x10^{-11}$	$4.8x10^{-9}$	$6.1x10^{-7}$	$3.5x10^{-5}$	$3.5x10^{-4}$
PCV penetration by corrosion	$3.8x10^{-5}$	$1.2x10^{-5}$	$6.3x10^{-7}$	$2.0x10^{-7}$	$4.6x10^{-3}$	$1.4x10^{-3}$	0.064
Vault fire	$3.4x10^{-8}$	$6.9x10^{-3}$	$5.1x10^{-10}$	$1.0x10^{-4}$	$3.7x10^{-6}$	0.73	$1.0x10^{-7}$
Truck bay fire	$2.0x10^{-9}$	$4.0x10^{-4}$	$3.4x10^{-11}$	$6.7x10^{-6}$	$2.4x10^{-7}$	0.049	$1.0x10^{-7}$
Spontaneous combustion	$2.0x10^{-11}$	$5.8x10^{-7}$	$3.4x10^{-13}$	$9.7x10^{-9}$	$2.5x10^{-9}$	$7.0x10^{-5}$	$7.0x10^{-7}$
Explosion in the vault	$4.7x10^{-9}$	$9.4x10^{-4}$	$7.9x10^{-11}$	$1.6x10^{-5}$	$5.8x10^{-7}$	0.12	$1.0x10^{-7}$
Explosion outside the vault	$2.2x10^{-11}$	$4.3x10^{-6}$	$3.6x10^{-13}$	$7.3x10^{-8}$	$2.6x10^{-9}$	$5.2x10^{-4}$	$1.0x10^{-7}$
Nuclear criticality	$1.4x10^{-11}$	$2.8x10^{-6}$	$1.8x10^{-13}$	$3.5x10^{-8}$	$2.2x10^{-10}$	$4.4x10^{-5}$	$1.0x10^{-7}$
Beyond evaluation basis earthquake	$6.7x10^{-8}$	0.013	$9.2x10^{-10}$	$1.8x10^{-4}$	$6.6x10^{-6}$	1.3	$1.0x10^{-7}$
Expected risk[d]	$3.8x10^{-5}$	–	$6.4x10^{-7}$	–	$4.6x10^{-3}$	–	–

[a] The risk values are calculated by multiplying the probability of cancer fatality (for the worker at 1,000 m or the maximum offsite individual) or the number of cancer fatalities (for the population to 80 km) by the accident frequency and the number of years of operation.

[b] Increased likelihood (or probability) of cancer fatality to a hypothetical individual (a single onsite worker at a distance of 1,000 m or the site boundary, whichever is smaller or to a hypothetical individual in the offsite population located at the site boundary) if exposed to the indicated dose. The value assumes the accident has occurred.

[c] Estimated number of cancer fatalities in the entire offsite population out to a distance of 80 km if exposed to the indicated dose. The value assumes the accident has occurred.

[d] Expected risk is the sum of the risks over the 50-year lifetime of the facility.

Note: All values are mean values.

Source: Calculated using the source terms in Tables M.5.2.2.1–3 and M.5.2.2.1–4 and the MACCS computer code.

Phaseout

Normal Operation. A phaseout of existing Pu storage facilities at SRS would reduce the impacts from radiological and chemical releases and exposures to levels slightly below the No Action levels. All workers involved in the transfer of the Pu from existing storage would be monitored to assure that their doses remain within regulatory limits and as low as reasonably achievable.

Facility Accidents. The phaseout operation will be conducted in accordance with DOE Orders to ensure that the risk to the public of prompt fatalities due to accidents or of cancer fatalities due to operations will be minimized. For current operations in the facility that would be phased out, the safety of workers and the public from accidents is controlled by Technical Safety Requirements that are specified in SARs or Basis for Interim Operations documents that have been prepared for the facility. Prior to initiating phaseout, the potential for accidents that could impact workers and the public will be assessed, and if necessary, applicable existing safety documentations will be modified to ensure safety for workers and the public.